

*Exper. 12.* In the middle of a black Paper I made a round hole about a fifth or sixth part of an Inch in Diameter. Upon this Paper I caused the Spectrum of Homogeneous Light described in the former Proposition, so to fall, that some part of the Light might pass through the hole of the Paper. This transmitted part of the Light I refracted with a Prism placed behind the Paper, and letting this refracted Light fall perpendicularly upon a white Paper two or three Feet distant from the Prism, I found that the Spectrum formed on the Paper by this Light was not oblong, as when 'tis made (in the third Experiment) by Refracting the Sun's compound Light, but was (so far as I could judge by my Eye) perfectly circular, the length being no greater than the breadth. Which shews that this Light is refracted regularly without any Dilatation of the Rays.

*Exper. 13.* In the Homogeneous Light I placed a Circle of  $\frac{1}{4}$  of an Inch in Diameter, and in the Sun's unrefracted Heterogeneous white Light I placed another Paper Circle of the same bigness. And going from the Papers to the distance of some Feet, I viewed both Circles through a Prism. The Circle illuminated by the Sun's Heterogeneous Light appeared very oblong as in the fourth Experiment, the length being many times greater than the breadth: but the other Circle illuminated with Homogeneous Light appeared Circular and distinctly defined as when 'tis viewed with the naked Eye. Which proves the whole Proposition.

*Exper. 14.* In the Homogeneous Light I placed Flies and such like Minute Objects, and viewing them through a Prism, I saw their Parts as distinctly defined as if I had viewed them with the naked Eye. The same Objects placed in the Sun's unrefracted Heterogeneous Light which was white I viewed also through a Prism, and saw them most confusedly

confusedly defined, so that I could not distinguish their smaller Parts from one another. I placed also the Letters of a small Print one while in the Homogeneous Light and then in the Heterogeneous, and viewing them through a Prism, they appeared in the latter case so confused and indistinct that I could not read them; but in the former they appeared so distinct that I could read readily, and thought I saw them as distinct as when I viewed them with my naked Eye. In both cases I viewed the same Objects through the same Prism at the same distance from me and in the same Situation. There was no difference but in the Light by which the Objects were illuminated, and which in one case was Simple and in the other Compound, and therefore the distinct Vision in the former case and confused in the latter could arise from nothing else than from that difference of the Lights. Which proves the whole Proposition.

And in these three Experiments it is further very remarkable, that the Colour of Homogeneous Light was never changed by the Refraction.

### P R O P. VI. Theor. V.

*The Sine of Incidence of every Ray considered apart, is to its Sine of Refraction in a given Ratio.*

**T**HAT every Ray considered apart is constant to it self in some certain degree of Refrangibility, is sufficiently manifest out of what has been said. Those Rays which in the first Refraction are at equal Incidences most refracted, are also in the following Refractions at equal Incidences most refracted; and so of the least Refrangible, and the rest which have any mean degree of Refran-